



[4910-13-P]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA-2020-0689; Product Identifier 2020-NM-060-AD]

RIN 2120-AA64

Airworthiness Directives; The Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to supersede Airworthiness Directive (AD) 2013-18-08, which applies to certain The Boeing Company Model 737-200, -200C, -300, -400, and -500 series airplanes. AD 2013-18-08 requires repetitive inspections for cracking of certain upper and lower skin panels of the fuselage, and of the fuselage skin along certain chem-milled lines, and corrective actions if necessary. AD 2013-18-08 also includes a terminating action for the repetitive inspections of certain modified or repaired areas only. Since the FAA issued AD 2013-18-08, there have been reports of additional cracking in certain horizontal and vertical chem-milled step locations outside of those identified in AD 2013-18-08. This proposed AD would continue to require repetitive inspections for cracking of the fuselage skin along certain chem-milled lines and applicable on-condition actions, and would expand the inspection area. This AD would continue to provide terminating action for repetitive inspections of certain modified or repaired areas. This proposed AD would also add airplanes to the applicability. The FAA is proposing this AD to address the unsafe condition on these products.

DATES: The FAA must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to <https://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: 202-493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this NPRM, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet <https://www.myboeingfleet.com>. You may view this service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195. It is also available on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0689.

Examining the AD Docket

You may examine the AD docket on the Internet at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0689; or in person at Docket Operations between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

The AD docket contains this NPRM, any comments received, and other information. The street address for Docket Operations) is listed above. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: James Guo, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email: james.guo@faa.gov.

SUPPLEMENTARY INFORMATION:

Comments Invited

The FAA invites you to send any written relevant data, views, or arguments about this proposal. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2020-0689; Product Identifier 2020-NM-060-AD” at the beginning of your comments. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. The FAA will consider all comments received by the closing date and may amend this NPRM because of those comments.

Except for Confidential Business Information (CBI) as described in the following paragraph, and other information as described in 14 CFR 11.35, the FAA will post all comments received, without change, to <https://www.regulations.gov>, including any personal information you provide. The FAA will also post a report summarizing each substantive verbal contact received about this proposed AD.

Confidential Business Information

Confidential Business Information (CBI) is commercial or financial information that is both customarily and actually treated as private by its owner. Under the Freedom

of Information Act (FOIA) (5 U.S.C. 552), CBI is exempt from public disclosure. If your comments responsive to this NPRM contain commercial or financial information that is customarily treated as private, that you actually treat as private, and that is relevant or responsive to this NPRM, it is important that you clearly designate the submitted comments as CBI. Please mark each page of your submission containing CBI as “PROPIN.” The FAA will treat such marked submissions as confidential under the FOIA, and they will not be placed in the public docket of this NPRM. Submissions containing CBI should be sent to the person identified in the FOR FURTHER INFORMATION CONTACT section. Any commentary that the FAA receives which is not specifically designated as CBI will be placed in the public docket for this rulemaking.

Discussion

Fatigue damage can occur locally, in small areas or structural design details, or globally, in widespread areas. Multiple-site damage is widespread damage that occurs in a large structural element such as a single rivet line of a lap splice joining two large skin panels. Widespread damage can also occur in multiple elements such as adjacent frames or stringers. Multiple-site damage and multiple-element damage cracks are typically too small initially to be reliably detected with normal inspection methods. Without intervention, these cracks will grow, and eventually compromise the structural integrity of the airplane. This condition is known as widespread fatigue damage (WFD). It is associated with general degradation of large areas of structure with similar structural details and stress levels. As an airplane ages, WFD will likely occur, and will certainly occur if the airplane is operated long enough without any intervention.

The FAA’s WFD final rule (75 FR 69746, November 15, 2010) became effective on January 14, 2011. The WFD rule requires certain actions to prevent structural failure

due to WFD throughout the operational life of certain existing transport category airplanes and all of these airplanes that will be certificated in the future. For existing and future airplanes subject to the WFD rule, the rule requires that DAHs establish a limit of validity (LOV) of the engineering data that support the structural maintenance program. Operators affected by the WFD rule may not fly an airplane beyond its LOV, unless an extended LOV is approved.

The WFD rule (75 FR 69746, November 15, 2010) does not require identifying and developing maintenance actions if the DAHs can show that such actions are not necessary to prevent WFD before the airplane reaches the LOV. Many LOVs, however, do depend on accomplishment of future maintenance actions. As stated in the WFD rule, any maintenance actions necessary to reach the LOV will be mandated by ADs through separate rulemaking actions.

In the context of WFD, this action is necessary to enable DAHs to propose LOVs that allow operators the longest operational lives for their airplanes, and still ensure that WFD will not occur. This approach allows for an implementation strategy that provides flexibility to DAHs in determining the timing of service information development (with FAA approval), while providing operators with certainty regarding the LOV applicable to their airplanes.

The FAA issued AD 2013-18-08, Amendment 39-17581 (78 FR 60660, October 2, 2013) (“AD 2013-18-08”), for certain The Boeing Company Model 737-200, -200C, -300, -400, and -500 series airplanes. AD 2013-18-08 requires repetitive inspections for cracking of certain upper and lower skin panels of the fuselage, and of the fuselage skin along certain chem-milled lines, and corrective actions if necessary.

AD 2013-18-08 also includes a terminating action for the repetitive inspections of certain modified or repaired areas only. The FAA issued AD 2013-18-08 to address fatigue cracking of the skin panels, which could result in sudden fracture and failure of the skin panels of the fuselage, and consequent rapid decompression of the airplane.

Actions Since AD 2013-18-08 was Issued

Since the FAA issued AD 2013-18-08, there have been reports of additional cracking in the horizontal and vertical chem-milled step locations outside of those identified in AD 2013-18-08. The cracking was caused by fatigue from hoop stress and higher than expected bending stresses across the chem-milled steps. The FAA has determined that the repetitive inspections must be expanded to include these areas and that additional airplanes are subject to the unsafe condition.

Related Service Information under 1 CFR part 51

The FAA reviewed Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020. This service information describes procedures for repetitive detailed and non-destructive tests (NDTs) (including external medium frequency eddy current (MFEC), external magneto optical imaging (MOI), external c-scan, external sliding probe, external high frequency eddy current (HFEC), external low frequency eddy current (LFEC), internal ultrasonic phased array (UTPA), or internal ultrasonic); inspections for cracking of the fuselage skin along all horizontal and vertical chem-milled locations with a history of cracking between stations (STAs) 259.5 and 1016; and applicable on-condition actions. On-condition actions include repair; LFEC inspections of certain repairs for cracking; detailed inspections of certain repairs for cracking and loose, missing, or damaged fasteners; replacement of loose, missing, or damaged fasteners; and preventative modifications. This service information is reasonably

available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

FAA's Determination-

The FAA is proposing this AD because the agency evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of the same type design.

Proposed AD Requirements

Although this proposed AD does not explicitly restate the requirements of AD 2013-18-08, this proposed AD would retain certain requirements of AD 2013-18-08. Those requirements are referenced in the service information identified previously, which, in turn, is referenced in paragraph (g) of this proposed AD. This proposed AD would expand the area for the existing inspections for cracking of the fuselage skin along all horizontal and vertical chem-milled locations and add airplanes to the applicability. This proposed AD would also require accomplishment of the actions identified as "RC" (required for compliance) in the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020, described previously. For information on the procedures, see this service information at <https://www.regulations.gov> by searching for and locating Docket No. FAA-2020-0689.

Costs of Compliance

The FAA estimates that this proposed AD affects 141 airplanes of U.S. registry. The FAA estimates the following costs to comply with this proposed AD:

Estimated costs for required actions

Action	Labor cost	Parts cost	Cost per product
Inspections	Up to 165 work-hours X \$85 per hour = \$14,025 per inspection cycle	\$0	Up to \$1,977,525 per inspection cycle

The FAA estimates the following costs to do any necessary corrective actions that would be required based on the results of the proposed inspections. The FAA has no way of determining the number of aircraft that might need these corrective actions:

Estimated costs of on-condition actions

Labor cost	Parts cost	Cost per product
Up to 185 work-hours X \$85 per hour = \$15,725	\$*	Up to \$15,725

*The FAA has received no definitive data that would enable providing parts costs for the on-condition actions specified in this proposed AD.

Authority for this Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

The FAA is issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

The FAA has determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that the proposed regulation:

- (1) Is not a “significant regulatory action” under Executive Order 12866,
- (2) Will not affect intrastate aviation in Alaska, and
- (3) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

The Proposed Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2013-18-08, Amendment 39-17581 (78 FR 60660, October 2, 2013), and adding the following new AD:

The Boeing Company: Docket No. FAA-2020-0689; Product Identifier 2020-NM-060-AD.

(a) Comments Due Date

The FAA must receive comments on this AD action by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

(b) Affected ADs

This AD replaces AD 2013-18-08, Amendment 39-17581 (78 FR 60660, October 2, 2013) (“AD 2013-18-08”).

(c) Applicability

This AD applies to The Boeing Company Model 737-100, -200, -200C, -300, -400, and -500 series airplanes, certificated in any category, as identified in Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020.

(d) Subject

Air Transport Association (ATA) of America Code 53, Fuselage.

(e) Unsafe Condition

This AD was prompted by reports of additional cracking in the horizontal and vertical chem-milled step locations outside of those identified in AD 2013-18-08. The FAA is issuing this AD to address fatigue cracking of the skin panels, which could result in sudden fracture and failure of the skin panels of the fuselage, and consequent rapid decompression of the airplane.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Required Actions for Group 1 through 25 Airplanes

For airplanes identified as Group 1 through 25 in Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020, except as specified in paragraph (h) of this AD: At the applicable times specified in paragraph 1.E., “Compliance,” of Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020, do all applicable actions identified as “RC” (required for compliance) in, and in accordance with, the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020. Actions identified as terminating action in Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020, terminate the applicable required actions of this AD, provided the terminating action is done in accordance with the Accomplishment Instructions of Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020.

(h) Exceptions to Service Information Specifications

(1) Where Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020, uses the phrase “the original issue date of this service bulletin,” this AD requires using “the effective date of this AD.”

(2) Where Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020, specifies contacting Boeing for repair instructions, this AD requires doing the repair before further flight using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Required Actions for Group 26 Airplanes

For airplanes identified as Group 26 in Alert Service Bulletin 737-53A1346, dated March 27, 2020: Within 120 days after the effective date of this AD, inspect the fuselage

skin along certain chem-milled lines for cracks, using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Los Angeles ACO Branch, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the certification office, send it to the attention of the person identified in paragraph (k)(1) of this AD. Information may be emailed to:

9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by The Boeing Company Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO Branch, FAA, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved previously for AD 2013-18-08 are approved as AMOCs for the corresponding provisions of Boeing Alert Service Bulletin 737-53A1346, dated March 27, 2020, that are required by paragraph (g) of this AD.

(5) For service information that contains steps that are labeled as Required for Compliance (RC), the provisions of paragraphs (j)(5)(i) and (ii) of this AD apply.

(i) The steps labeled as RC, including substeps under an RC step and any figures identified in an RC step, must be done to comply with the AD. If a step or substep is labeled “RC Exempt,” then the RC requirement is removed from that step or substep. An AMOC is required for any deviations to RC steps, including substeps and identified figures.

(ii) Steps not labeled as RC may be deviated from using accepted methods in accordance with the operator’s maintenance or inspection program without obtaining approval of an AMOC, provided the RC steps, including substeps and identified figures, can still be done as specified, and the airplane can be put back in an airworthy condition.

(k) Related Information

(1) For more information about this AD, contact James Guo, Aerospace Engineer, Airframe Section, FAA, Los Angeles ACO Branch, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5357; fax: 562-627-5210; email: james.guo@faa.gov.

(2) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Contractual & Data Services (C&DS), 2600 Westminister Blvd., MC 110-SK57, Seal Beach, CA 90740-5600; telephone 562-797-1717; internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Airworthiness Products Section, Operational Safety Branch, 2200 South 216th St., Des Moines, WA. For information on the availability of this material at the FAA, call 206-231-3195.

Issued on August 6, 2020.

Lance T. Gant, Director,
Compliance & Airworthiness Division,
Aircraft Certification Service.

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